REMARKS

Claims 1-20 remain in this application. Claims 1 and 12 are currently amended. Support for the amendments can be found in the specification and original claims as filed. No new matter has been added.

Support for amended claim 1 can be found, for example, at page 6, line 10, and at page 10, lines 27-32. Support for amended claim 12 can be found, for example, at page 12, line 29 to page 13, line 7.

CLAIM REJECTION - 35 USC § 103

At page 3, the Office Action rejects claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over AGERUP (US 5,827,937) in view of MILLER (US 6,174,999). Applicants respectfully traverse the rejection.

AGERUP describes a process for the production of a biocompatible crosslinked gel that includes a) starting a crosslinking reaction of a predetermined quantity of at least one biocompatible polymer in solution by the addition of a quantity of crosslinking agent; b) crosslinking the polymer; c) diluting the reaction mixture resulting in a decrease in the concentration of polymer in solution and stopping the crosslinking reaction; d) evaporating or dialyzing the reaction mixture to obtain an increase in the concentration of polymer to restart the

crosslinking reaction. The presently claimed process is distinct from the AGERUP process.

Present claim 1 is directed to a process that features: starting a crosslinking reaction of a predetermined quantity of at least one biocompatible polymer in solution by the addition of a quantity of crosslinking agent; crosslinking the polymer; adding a supplemental quantity of polymer of a molecular weight higher than 500,000 Da in solution with dilution of the reaction mixture so as to decrease the overall concentration of the polymer in solution, and continuing crosslinking; and stopping the crosslinking reaction by elimination of the crosslinking agent. AGERUP fails to teach or suggest such a process.

In particular, AGERUP fails to teach or suggest a process that includes crosslinking the polymer, and adding supplemental polymer while diluting the reaction mixture and continuing the crosslinking reaction. In contrast to AGERUP, the presently claimed process does not stop the crosslinking reaction when the supplemental amount of polymer having a specific molecular weight (higher than 500,000) is added. The supplemental addition results in a dilution of the reaction mixture such that the overall concentration of polymer in the mixture decreases. After crosslinking continues, the crosslinking reaction is then stopped by elimination of the crosslinking agent.

As detailed in the specification, under these conditions, the polymer chains have new crosslinking sites which

will react with the residual crosslinkage agent but with a lesser quantity of crosslinkage because the quantity of crosslinking agent has decreased. The number of bridges on the chains of gel formed in the first step of crosslinking is greater than the number of bridges formed later. The degree of crosslinking thus varies in the final gel which is constituted by strongly crosslinked hubs (for example with a quantity of crosslinkage of 25%) interconnected by a gel which is less crosslinked (i.e., the quantity of crosslinkage decreases progressively and can reach 1%). See, page 10, line 27 to page 11, line 9, of the specification.

For at least these reasons, AGERUP fails to teach or suggest a process for the production of a biocompatible crosslinked gel that features the combination of steps recited in claim 1 and claims 2-9 and 13-20 dependent thereon. The Office Action relies on MILLER merely for teaching how to stop a polymerization reaction by eliminating a non-polymeric reactant from the reaction mixture by dialysis. MILLER, however, fails to remedy the above noted deficiencies of AGERUP.

Claims 10-11 are directed to a gel prepared by the method of claim 1. AGERUP also fails to teach or suggest such a gel. As detailed in the above remarks, a gel prepared following the method of present claim 1 has a varying degree of crosslinking constituted by strongly crosslinked hubs (for example with a quantity of crosslinkage of 25%) interconnected by

a gel which is less crosslinked (i.e., the quantity of crosslinkage decreases progressively and can reach 1%). The presently claimed method results in a biocompatible gel that is distinct from any gel produced according to AGERUP and MILLER.

Claim 12 is directed to a method to separate, replace or fill a biological tissue or increase the volume of the tissue or to supplement or replace a biological fluid comprising injecting the gel according to claim 10 in the tissue. Because AGERUP and MILLER fail to teach or suggest the gel according to claim 10, these references also fail to render claim 12 obvious.

For all of these reasons, AGERUP and MILLER, alone or in combination, fail to teach or suggest and fail to render obvious, claims 1-20. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

CLAIM REJECTIONS – 35 USC § 112

At pages 7-8, the Office Action rejects claim 12 under 35 U.S.C. § 112, second paragraph, as being indefinite, as well as under 35 U.S.C. § 101 for not being a proper process claim. Applicants respectfully traverse the rejection.

Currently amended claim 12 addresses the issues noted in the Office Action. Amended claim 12 is directed to a method and recites an active positive step. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

CONCLUSION

Entry of the above amendments is earnestly solicited. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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